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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		09/753,004	VENKATARAMAN ET AL.
		Examiner	Art Unit	
		Bob A. Phunkulh	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 November 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/12/07</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

This communication is in response to applicant's 11/05/2007

amendment/responses in the application of **VENKATARAMAN et al.** for "**METHOD**

AND APPARATUS FOR CLEARING A LARGE NUMBER OF CONNECTIONS IN AN

ATM NETWORK" filed 12/19/2000. The amendments/response to the claims have

been entered. No claims have been canceled. No claims have been added. Claims

1-58 are now pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 37-51 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The claimed subject matter "machine-readable

medium" is directed toward a signal per se. When a computer program is recorded on a

medium i.e. electrical, optical, acoustical or other form of propagated signals (such as

carrier waves, infrared signals and digital signals, see page 8 of applicant's

specification), it is not statutory since a signal does not fall within one of the four

statutory classes of § 101 (process, machine, compositions of matter, and

manufactures).

Claims that recite nothing but the physical characteristics of a form of energy, such

as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism,

per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at

112-14. Moreover, <u>it does not appear that a claim reciting a signal encoded with</u>

<u>functional descriptive material falls within any of the categories of patentable subject</u>

<u>matter set forth in § 101</u>.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-15, 18-20, 26-30, 32-45, 48-49, 51-55, 57-58 are rejected under 35

U.S.C. 102(e) as being anticipated by NISHIKADO et al. (US 6,366,582), hereinafter

NISHIKADO .

Regarding claim 1, NISHIKADO discloses a method comprising:

clearing of a plurality of first connections between a first node (between at least

two exchanges) and a second node of an ATM network from the first node; and

for each the clearing, sending a first message (RELEASE message) comprising

a signal bulk release message from the first node to the second containing an

identification of the first connections (connections are setup/release in group unit, see

col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-54), the identifier comprising a

list of connection identifiers allowing both of consecutive connection identifiers and non-

consecutive connection identifiers (as shown in figure 2 table 4, the list includes

conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-consecutive identifiers 2-8 or 3-8-1,

see figure 2).

Regarding claim 2, NISHIKADO discloses receiving the first message at the

second node; clearing the first connections from the second node in response to the

received first message; and sending a single second message from the second node to

the first node in response to at least one of clearing the first connections from the

second node and receiving the first message identifying at least one of the connections

cleared in response to the received first message, and the first message (a connection

switching exchange is requested to set up or release logical connections in group units,

each of which comprise logical connections having consecutive identifiers, see col. 26-

62).

Regarding claim 3, NISHIKADO inherently discloses enabling an interpretation

of the received first message wherein the clearing from the second node depends upon

the enabling (in order to receive data/messages both the exchanges or nodes must be

enable).

Regarding claim 6, NISHIKADO discloses a method comprising:

receiving a first message comprising a single bulk release message by a first

node of an ATM network from a second node of the ATM network connected to the first

node by at least one first connections;

clearing the first connections from the second node in response to receiving the

first message (connections are setup/release in group unit, see col. 5 lines 28-62; col. 4

lines 40-57; and col. 41 lines 11-54), the identifier comprising a list of connection

identifiers allowing both of consecutive connection identifiers and non-consecutive

connection identifiers (as shown in figure 2 table 4, the list includes conservative

identifiers 3-1-1, 3-1-2, 3-1-3; and non-consecutive identifiers 2-8 or 3-8-1, see figure 2);

and

sending a second message from the first node to the second node identifying at

least one of the first connections cleared from the second node and the first message

(see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-44).

Regarding claim 7, NISHIKADO inherently discloses enabling an interpretation

of the received first message wherein the clearing from the second node depends upon

the enabling (enabling is inherent feature since the exchanges need ability to identify

the release message for the identified connection group).

Regarding claim 8, NISHIKADO discloses including clearing the first connections

from the second node; and wherein the first message includes an identification of the

first connections (a connection switching exchange is requested to set up or release

logical connections in group units, each of which comprise logical connections having

consecutive identifiers, see col. 5 lines 26-62).

Regarding claim 9, NISHIKADO discloses a method of clearing a plural number

of connections between a first node and a second node in an Asynchronous Transfer

Mode network including:

sending at least one first message from the first node to the second node, each

first message including an identification of at least one of each of a plural number of first

connections to be cleared from the second node by the first message (connections are

setup/release in group unit, see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines

11-54), the identifier comprising a list of connection identifiers allowing both of

consecutive connection identifiers and non-consecutive connection identifiers (as shown

in figure 2 table 4, the list includes conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-

consecutive identifiers 2-8 or 3-8-1, see figure 1), and

each of a plural number of first connections that is one of cleared from the first

node and to be cleared from the first node (see col. 5 lines 28-62; col. 4 lines 40-57;

and col. 41 lines 11-44).

Regarding claim 10, NISHIKADO discloses for each the first message,

clearing from the first node each the first connection (a connection switching

exchange is requested to set up or release logical connections in group units, each of

which comprise logical connections having consecutive identifiers, see col. 26-62).

Regarding claim 11, NISHIKADO discloses the first message is consistent with

an Asynchronous Transfer Mode formatted message (*release message is consistent*

with the ATM format, abstract).

Regarding claim 12, NISHIKADO discloses enabling the first node to send

the first message before the sending (in order to receive data/messages both the

exchanges or nodes must be enable).

Regarding claim 13, NISHIKADO discloses sending is in response to a

requirement for a clearing of a plural number of first node connections (see col. 8 lines

12-42).

Regarding claim 14, NISHIKADO discloses sending is in response to an event

that includes at least one of

a received Physical interface reset command,

a received Virtual interface reset command,

a received Datalink Layer Service-Specific Connection-Oriented Protocol reset,

a received Global path ATM Forum defined RESTART message,

a received Virtual Path ATM Forum defined RESTART message,

a received plural number of RELEASE messages, and

a received Force Reroute in a Semi-Permanent Switched Virtual Circuit based

network (a request for release, see col. 8 lines 12-42).

Regarding claim 15, NISHIKADO discloses the first message includes at least

an identification of each of the first connections to be cleared from the second node,

and further including:

the second node receiving the first message, and

the second node clearing each of the connections in the second node identified as to be

cleared from the second node in the first message in response to receiving the first

message (see col. 8 lines 12-42).

Regarding claim 18, NISHIKADO inherently discloses enabling the second node

to receive the first message before the receiving (in order to receive data/messages

both the exchanges or nodes must be enable).

Regarding claim 19, NISHIKADO inherently discloses sending at least one of

a second message to the first node identifying the connections cleared by the

second node in response to the second node receiving the first message, and

a second message to the first node identifying the first message received by the

second node (it is well know in the art that the release complete message is sent from

the second exchange to the first exchange in response to the release message, see

admitted prior art pages 1-2).

Regarding claim 20, NISHIKADO inherently discloses enabling the second node to send the first message before the sending (in order to receive data/messages both the exchanges or nodes must be enable).

Regarding claim 26, NISHIKADO inherently discloses enabling the first node to send the second message before the sending (in order to received the release complete message the first exchange must be enable).

Regarding claim 27, NISHIKADO discloses an Asynchronous Transfer Mode (ATM) node that includes

a first circuit that generates an inter-nodal call control first message comprising a single bulk release message containing an identification of at least one of

each of a plural number of first connections to be cleared at an ATM first node to be coupled to the ATM node, and

each of a plural number of first connections that is one of cleared from the ATM node and to be cleared from the ATM node (connections are setup/release in group unit, see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-54), the identifier comprising a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers (as shown in figure 2 table 4, the list includes conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-consecutive identifiers 2-8 or 3-8-1, see figure 2); and

a second circuit to transmit the first message to the first node (see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-44, figure 1).

Regarding claim 28, NISHIKADO discloses a circuit to enable one of the generation of the first message and the transmission of the first message, in response to an input if the ATM node was disabled; and to disable the ATM node from one of the generation of the first message and the transmission of the first message in response to an input if the ATM node was enabled (in order to received the release complete message the first exchange must be enable; and a connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 29, NISHIKADO discloses a circuit to clear each of the first connections (A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 30, NISHIKADO discloses a circuit to receive a second message containing an identification of at least one of each of a plural number of second connections that is one of cleared from a first node and to be cleared from the first

Node (the RELEASE COMPLETE message, see pages 1 and 2).

Regarding claim 32, NISHIKADO discloses a circuit to receive and interpret a second message from a coupled second node that contains an identification of a plural number of second connections; and a circuit to clear the second connections from the ATM node A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 33, NISHIKADO discloses a circuit to send a third message from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections cleared by the ATM node in response to the second message, and the second connections A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 34, NISHIKADO discloses An Asynchronous Transfer Mode (ATM) node (the ATM exchange) that includes

a first circuit to receive and interpret a first message from a first node (another ATM exchange receives the release request from a terminating node, see col. 8 lines 12-42) that contains an identification of a plural number of first connections (connections are setup/release in group unit, see col. 5 lines 28-62; col. 4 lines 40-57;

and col. 41 lines 11-54), the identifier comprising a list of connection identifiers allowing

both of consecutive connection identifiers and non-consecutive connection identifiers

(as shown in figure 2 table 4, the list includes conservative identifiers 3-1-1, 3-1-2, 3-1-

3; and non-consecutive identifiers 2-8 or 3-8-1, see figure 1); and

a second circuit to clear the first connections from the ATM node (connections

are setup/release in group unit, see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41

lines 11-54, see figure 1).

Regarding claim 35, NISHIKADO inherently discloses a third circuit to send an

ATM inter-nodal call control second message from the ATM node to the first node that

identifies a plural number of second connections, the second connections characterized

by at least one of the connections cleared by the ATM node in response to the first

message, and the first connections (Logical connections in the communication network

are thus controlled in a uniform manner as a connection group or a plurality of

connection groups. Even a logical connection passing through a plurality of connection

switching exchanges has only one connection identifier. A connection switching

exchange is requested to set up or release logical connections in group units, each of

which comprise logical connections having consecutive identifiers, see col. 5 lines 28-

62).

Regarding claim 36, NISHIKADO inherently discloses a circuit to enable the first

circuit to interpret the first message in response to an enabling input (in order to receive

data/messages both the exchanges or nodes must be enable).

Regarding claim 44, NISHIKADO discloses a machine-readable medium that

provides instructions, which when executed by at least one processor (inherent feature

in the ATM first node), cause the processor to perform operations comprising

preparing at least one first message comprising a single bulk release message to

be sent from a first node of an ATM network (the first exchange 1-1, see figures 1 and

2)to a second node of an ATM network (the second exchange 1, see figures 1 and 2),

each first message including an identification of a first connections to be cleared from

the second node by the first message (connections are setup/release in group unit, see

col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-54), the identifier comprising a

list of connection identifiers allowing both of consecutive connection identifiers and non-

consecutive connection identifiers (as shown in figure 2 table 4, the list includes

conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-consecutive identifiers 2-8 or 3-8-1,

see figure 1).

Regarding claim 45, NISHIKADO discloses for each the first message, clearing

from the first node each the first connection (A connection switching exchange is

requested to set up or release logical connections in group units, each of which

comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 48, NISHIKADO discloses the first message is consistent with an Asynchronous Transfer Mode formatted message (see abstract).

Regarding claim 49, NISHIKADO discloses interpreting a second message consistent with an Asynchronous Transfer Mode formatted message received from an ATM network node wherein the second message includes an identification of each of a plural number of connections to be cleared from the first node (A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 50, NISHIKADO discloses clearing each of the connections in the first node identified as to be cleared in the second message in response to interpreting the second message (A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62).

Regarding claim 51, NISHIKADO discloses preparing at least one of a third message to the ATM network node identifying the connections cleared by the first node in response to the first node interpreting the second message, and   a third message to the ATM network node identifying the second message received by the first

node (A connection switching exchange is requested to set up or release logical

connections in group units, each of which comprise logical connections having

consecutive identifiers, see col. 5 lines 28-62; and it is well know in the art that the

release complete message is sent from the second exchange to the first exchange in

response to the release message, see admitted prior art pages 1-2).

Regarding claim 52, NISHIKADO discloses an Asynchronous Transfer Mode

(ATM) node that includes means for generating an inter-nodal call control first message

type comprising a single bulk release message that is to identify at least one of each of

a plural number of first connections to be cleared at an ATM first node coupled to the

ATM node, and each of a plural number of first connections that is one of cleared from

the ATM node and to be cleared from the ATM node (connections are setup/release in

group unit, see col. 5 lines 28-62; col. 4 lines 40-57; and col. 41 lines 11-54), the

identifier comprising a list of connection identifiers allowing both of consecutive

connection identifiers and non-consecutive connection identifiers (as shown in figure 2

table 4, the list includes conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-

consecutive identifiers 2-8 or 3-8-1, see figure 1); and

means for transmitting the first message to the first node (see col. 5 lines 28-62,

see figure 1).

Regarding claim 53, NISHIKADO inherently discloses means for enabling one

of the generation of the first message and the transmission of the first message, in

response to an input if the ATM node was disabled, and for disabling one of the

generation of the first message and the transmission of the first message in response to

an input if the first node was enabled (in order to receive the release message the first

exchange must be enable).

Regarding claim 54, NISHIKADO discloses means for clearing each of the first

connections (A connection switching exchange is requested to set up or release logical

connections in group units, each of which comprise logical connections having

consecutive identifiers, see col. 5 lines 28-62)

Regarding claim 55, NISHIKADO discloses means for receiving a second

message type containing an identification of at least one of each of a plural

number of second connections in response to the first node receiving the first message

type that is one of cleared from a second node and to be cleared from the second node

(A connection switching exchange is requested to set up or release logical connections

in group units, each of which comprise logical connections having consecutive

identifiers, see col. 5 lines 28-62; and it is well know in the art that the release complete

message is sent from the second exchange to the first exchange in response to the

release message, see admitted prior art pages 1-2).

Regarding claim 57, NISHIKADO discloses means for receiving a first message

type from a second node, the third message type containing an identification of a plural

number of second connections; means for interpreting the received first message type; and means for clearing the second connections from the ATM node in response to the interpreting (A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62; and it is well know in the art that the release complete message is sent from the second exchange to the first exchange in response to the release message, see admitted prior art pages 1-2)..

Regarding claim 58, NISHIKADO discloses means for sending a second message type from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections cleared by the ATM node in response to the interpreting, and the second connections (A connection switching exchange is requested to set up or release logical connections in group units, each of which comprise logical connections having consecutive identifiers, see col. 5 lines 28-62; and it is well know in the art that the release complete message is sent from the second exchange to the first exchange in response to the release message, see admitted prior art pages 1-2).

Regarding claims 37 and 40, NISHIKADO discloses a machine-readable medium that provides instructions, which when executed by at least one processor, cause and processor to perform operations comprising receiving an inter-nodal message by an ATM node that includes a plurality of identified connections to clear from the node (connections are setup/release in group unit, see col. 5 lines 28-62; col. 4 lines

40-57; and col. 41 lines 11-54), the message comprising an identifier comprising a list

of connection identifiers allowing both of consecutive connection identifiers and non-

consecutive connection identifiers (as shown in figure 2 table 4, the list includes

conservative identifiers 3-1-1, 3-1-2, 3-1-3; and non-consecutive identifiers 2-8 or 3-8-1,

see figure 1).

Regarding claims 38, 41, NISHIKADO discloses the operation includes a

transaction identification (assigns a connection identifier to logical connections passing

through a plurality of connection switching exchanges, see claim 1).

Regarding claims 39, 42-43, NISHIKADO discloses the second and first

message includes the transaction identification (issues a command to set up or release

(types of message) logical connections in one of the group units with consecutive

connection identifiers in the group unit to the connection switching exchanges by way of

operation-control communication lines, see claim 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which the subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 16, 31, 46, 50, and 56 are rejected under 35 U.S.C. 103(a) as being

unpatentable over NISHIKADO in view of MORRIS et al. (US 6,275,493), hereinafter

MORRIS.

Regarding claims 16, 31, 46, 50, and 56, the NISHIKADO fails to explicitly

disclose ATM node includes a database of the first connections that are cleared from

the ATM node, and a data base of the first connections that are cleared from the ATM

node from which are deleted the second connections in the received second message

type.

MORRIS, on the other hand, discloses ATM nodes, which include ATM switches

and cross-connect apparatus, use routing tables to map VCI and VPI values received in

an incoming cell to outgoing values used to select an outgoing link as a way of routing

the associated cell through the ATM node (see col. 1 lines 23-40).

Therefore, it would have been obvious to one having ordinary skill in the art at

the time of invention was made includes the teaching of MORRIS in the ATM nodes of

NISHIKADO for the table or database is essential part of the ATM communication for

maintaining the VCI/VPI for active connections in ATM network.

Allowable Subject Matter

Claims 17, 21-25 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 11/13/2007 have been fully considered but they are

not persuasive.

In response to the applicant's argument for pages 16-18:

Claims that recite nothing but the physical characteristics of a form of energy,

such as a frequency, voltage, or the strength of a magnetic field, define energy or

magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S.

(15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded

with functional descriptive material falls within any of the categories of patentable

subject matter set forth in § 101.

First, a claimed signal is clearly not a "process" under § 101 because it is not a

series of steps. The other three § 101 classes of machine, compositions of matter and

manufactures "relate to structural entities and can be grouped as 'product' claims in

order to contrast them with process claims." 1 D. Chisum, Patents § 1.02 (1994). The

three product classes have traditionally required physical structure or material.

"The term machine includes every mechanical device or combination of mechanical

device or combination of mechanical powers and devices to perform some function and

produce a certain effect or result." Corning v. Burden, 56 U.S. (15 How.) 252, 267

(1854). A modern definition of machine would no doubt include electronic devices which

perform functions. Indeed, devices such as flip-flops and computers are referred to in

computer science as sequential machines. A claimed signal has no physical structure,

does not itself perform any useful, concrete and tangible result and, thus, does not fit

within the definition of a machine.

A "composition of matter" "covers all compositions of two or more substances

and includes all composite articles, whether they be results of chemical union, or of

mechanical mixture, or whether they be gases, fluids, powders or solids." Shell

Development Co. v. Watson, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C.

1957), aff'd, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). A claimed signal is not

matter, but a form of energy, and therefore is not a composition of matter.

The Supreme Court has read the term "manufacture" in accordance with its dictionary

definition to mean "the production of articles for use from raw or prepared materials by

giving to these materials new forms, qualities, properties, or combinations, whether by

hand-labor or by machinery." Diamond v. Chakrabarty, 447 U.S. 303, 308, 206 USPQ

193, 196-97 (1980) (quoting American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1,

11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other

courts have applied similar definitions. See American Disappearing Bed Co. v.

Arnaelsteen, 182 F. 324, 325 (9th Cir. 1910), cert. denied, 220 U.S. 622 (1911). These

definitions require physical substance, which a claimed signal does not have. Congress

can be presumed to be aware of an administrative or judicial interpretation of a statute

and to adopt that interpretation when it re-enacts a statute without change. Lorillard v.

Pons, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been

aware of the interpretation of manufacture in American Fruit Growers when it passed

the 1952 Patent Act.

A manufacture is also defined as the residual class of product. 1 Chisum, § 1.02[3]

(citing W. Robinson, The Law of Patents for Useful Inventions 270 (1890)).

A product is a tangible physical article or object, some form of matter, which a signal

is not. That the other two product classes, machine and composition of matter, require

physical matter is evidence that a manufacture was also intended to require physical

matter. A signal, a form of energy, does not fall within either of the two definitions of

manufacture. Thus, a signal does not fall within one of the four statutory classes of §

101.

On the other hand, from a technological standpoint, a signal encoded with

functional descriptive material is similar to a computer-readable memory encoded with

functional descriptive material, in that they both create a functional interrelationship

with a computer. In other words, a computer is able to execute the encoded functions,

regardless of whether the format is a disk or a signal.

In pages 20-26, the argument for the applicant is NISHIKADO fails to disclose

connections, the identification comprising a list of connection identifiers allowing both

of consecutive connection identifiers and <u>non-consecutive connection identifiers</u>.

In response to the applicant's argument NISHIKADO discloses in col. 1 lines 62 to

col. 2 lines 23 the following:

> The switching table 4 is a table showing information on each pair of logical connections to be linked
> to each other. More particularly, the switching table 4 shows mapping relations from information on
> communication lines and connection identifiers assigned to the logical connections on the input
> side to information on communication lines used by logical connections on the output side and
> connection identifiers assigned to the logical connections on the output side, as well as information
> on attributes of the logical connections, such as band attributes. In the example shown in FIG. 2,

the connection identifiers 3-1-1, 3-1-2 and 3-1-3 using the communication line 2-1 on the input side are associated respectively with the connection identifier 3-8-1 using the communication line 2-8 and the connection identifiers 3-9-1 and 3-9-2 using the communication line 2-9 on the output side. In this example, the switching table 4 is provided individually for each of the communication lines 2.

Since a switching table 4 is associated with each communication line 2, information for input-side communication line 2 is not present in the switching table 4. More particularly, the switching table 4 comprises a column 41 showing connection identifiers assigned to input-side logical connections, a column 42 showing information on output-side communication lines, a column 43 showing connection identifiers assigned to logical connections using the output-side communication lines shown in the entry of column 42, a column 44 showing logical connection attributes and a column 45 showing validity bits each indicating whether the line entry is valid or invalid.

As cited above, NISHIKADO explicitly discloses the list identifier comprising consecutive connection identifiers i.e. 3-1-1 to 3-1-3 or 3-9-1 to 3-9-3 for · communication line 2-1 or 2-9, respectively (see col. 41 lines 11-54). Also, the list identifier includes non-consecutive identifiers 2-8, 2-8-1 (table 4, figure 2). Therefore, NISHIKADO explicitly discloses the list identifier comprising consecutive connection identifiers and inherently discloses the list identifier comprising non-consecutive connection identifiers.

In response to applicant's argument that MORRIS is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is cited only to show that in ATM network communication, routing table (database) is used to keep track <u>active</u> virtual connections (see col. 1 lines 22-33).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any response to this action should be mailed to:

> The following address mail to be delivered by the United States Postal
> Service (USPS) only:
>
> Mail Stop _____
> Commissioner for Patents
> P. O. Box 1450
> Alexandria, VA 22313-1450

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571)**

272-3083. The examiner can normally be reached on Monday-Tursday from 8:00 A.M.

to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-

week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor **Jay Patel**, can be reach on **(571) 272-2988.** The fax phone number for this

group is **(571) 273-8300.**

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Bob A. Phunkulh
Primary Examiner
TC 2600   **BOB PHUNKULH**
Technology Division 2619   **PRIMARY EXAMINER**
January 22, 2008